RENOLD

Chain Drive Calculation - 27-Jan-2019

Company: j

Address: cy

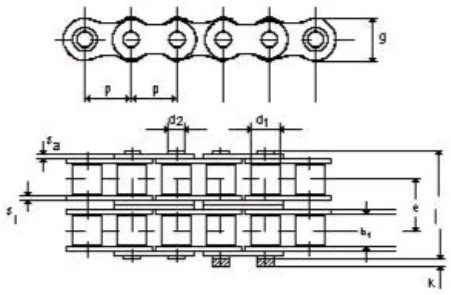
Contact: **raj**
com

Chain: ANSI 50 (ISO 606) Duplex Renold Synergy

Serial Number: GY50A2

Chain Data

Pitch:	p = 15.875 mm	Height:	g = 15.09 mm
ISO Breaking Load:	Fb = 43600 N	Inner Plate Thickness:	si = 2.00 mm
Inner Width:	b1 = 9.40 mm	Outer Plate Thickness:	sa = 2.00 mm
Roller Diameter:	d1 = 10.16 mm	Pin Length:	l = 38.40 mm
Pin Diameter:	d2 = 5.08 mm	Connecting Pin Ext.:	k = 2.60 mm
Mass:	q = 1.98 kg/m	Bearing Area:	f = 1.40 cm²



Loading Condition

Input Power:	P = 0.75 kW	Input Speed:	n1 = 50.00 rpm
Torque:	T = 143.25 Nm	Static Force:	F = 3334 N
Chain Linear Velocity:	v = 0.22 m/s	Centrifugal Force:	Ff = 0.10 N
Bearing Pressure:	Pr = 23.82 N/mm²	Dynamic Force:	Fd = 3334 N
Chain Safety Factors:	Static: 13.07 Dynamic: 13.07	Total Force:	Fg = 3334.98 N

Environment Conditions

Loading Classification:	Driving Machine: Smooth Running. Driven Machine: Smooth Running.
Service Conditions:	Recommended.
Environment Condition:	Abrasive Environment. Indoor Application.

Expected Working Life of the Chain

The working life of the chain is > 30000

This is within the range of its wear resistance, i.e. after this time 3% wear elongation will be reached.

Chain Drive

Number of Links:	X = 394	
Chain Length:	l = 6254.75 mm	
Centre Distance:	a = 2992.44 mm	
Ratio:	i = 1.00	
Number of Teeth:	Driving Sprocket (Z1): 17	Driven Sprocket (Z2): 17
Pitch Circle Diameter:	Driving Sprocket (Z1): 86.39 mm	Driven Sprocket (Z2): 86.39 mm
Recommended Lubrication:	Manual Lubrication	

Only valid for the above Renold product number.

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